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REMARKS

The entering of the amendments in the response received 11/27/2007 by the Examiner is acknowledged. New claims 29 and 30 are old claims 2 and 4. In order to have proper dependency from claim 8 they were rewritten as claims 29 and 30. Claims 2 and 4 have been canceled.

Claim rejections – 35 USC § 103

1. Claims 6, 12, 14-18 and 19-27 have been rejected under 35 USC 103(a) as being unpatentable over Kazumi (JP 02-904593) in light of Buckmaster (US 4,714,756, hereinafter "Buckmaster '756"). Applicant disagrees.

Claim 6, of the present invention, discloses attaining **adhesion promotion** which is not disclosed in neither Kazumi nor Buckmaster '756. Claim 6 further discloses obtaining a bubble-free lining **adhered** to the interior surface of a hollow article. Claim 6, of the present invention, discloses use of fluorine treatment and non-bubble promoting metal powder to achieve a bubble-free and adherent PFA to the interior surface of the article.

Kazumi teaches a bubble-suppressing metal powder [0007], rather than a non-bubble promoting metal powder of claim 6 of the present invention. Kazumi further states that the objective of its invention is to **prevent the occurrence** of gas bubbles in the resin layer [0010] and [0011]. The Examples of Kazumi state that gas bubbles do not remain in the PFA [0017]. Thus, Kazumi solves the problem of bubble formation in the PFA layer, meeting the invention objective and therefore would have no motivation to combine the more costly fluorinated PFA to reduce bubble formation in addition to the bubble-suppressing metal powder except perhaps as an alternative to the use of bubble-suppressing metal powder. Hence, Kazumi provides no motivation for combining its methodology with that of Buckmaster.

Buckmaster teaches the desirability of having **low metal contamination** in PFA (col. 1, lines 48-57) even to the extent of avoiding use of thermoplastic processing equipment in preparing the PFA granules (col. 2, lines 39-42). Kazumi does not need the fluorinated PFA granules of Buckmaster to suppress bubbling as described above, and the point of Buckmaster's process is to prepare low-metal content PFA which teaches away from the adding of metal powder taught by Kazumi to suppress bubbling. Hence, there is no motivation to one of ordinary skill in the art to combine these references, other than in hindsight in view of the present invention, because combining the Kazumi and Buckmaster is redundant to reduce or suppress bubbling and adds additional cost to the objective of suppressing bubbling.

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The Examiner says that Kazumi's disclosure of metal powder constituting 0.1 to 30 wt% of the composition overlaps Applicant's 0.3 to 1.2 wt% range, and that it is a matter of routine experimentation to optimize the wt% of metal powder used, as taught by Kazumi, in order to have increased the metal powder's usefulness in preventing bubbling of the PFA. Applicant contends that the optimization of wt% metal powder in the instant invention is not directed to increasing the metal powder's usefulness in preventing bubbling of the PFA but to optimizing the adhesion of the PFA to the interior surface of the hollow article, i.e. the substrate. As disclosed in claim 6 of the present invention, when the metal content exceeds 2 wt %, the peel strength falls below at least 25 lb/in. Example 6 (page 17), shows a peel strength of 18 lb/in when the metal content is 3 wt%. Thus, there is a specific range of metal content applicable to the present invention (i.e. under 2 wt %) which is not applicable to the entire range of metal powder content disclosed by Kazumi (i.e. 1 to 30 wt %). One does not learn from Kazumi that metal powder content is related to PFA adhesion to the substrate and therefore has no motivation to experiment with wt% metal powder for that purpose. Furthermore, absent the teaching of the instant invention, one does not know that the wt% metal powder effective for adhesion will be effective for prevention of bubbling of the PFA. Kazumi teaches a preference for about 5 wt% metal powder for most effective gas bubble removal [0018], which amount is over two and one-half times greater than the maximum amount claimed in the instant invention.

On page 3 of the 2/27/08 Office Action, the Examiner states that Kazumi, while not disclosing adhesion characterized by a peel strength of at least about 25 lb/in, does address the problem of adhesion in [0003] and [0005]. Applicant disagrees. Applicant says that in [0003] Kazumi describes an "internal pouch" or internally mounted sack in a container. This is also known as a "loose liner". The loose liner has no adhesion and only incidental contact with the walls of the container. In [0005], Kazumi refers to an earlier patent application JP H2-338899 directed to rotolining a vessel with fluoropolymer, as a solution to the problems recited in preceding paragraphs, including the adhesion problem outlined in [0003]. Kazumi does not find fault with the adhesion achieved in JP H2-338899, but says that the formation of gas bubbles is a shortcoming [0006], which JP 02-904593, by introducing metal powder, overcomes. Therefore it is not the purpose of Kazumi JP 02-904593 to improve adhesion, already adequate in view of the earlier JP H2-338899, but to suppress gas bubbles. The skilled artisan would conclude in reading Kazumi JP 02-904593 that the adhesion problem mentioned in [0003] has been solved by JP H2-338899, simply rotolining with fluoropolymer, and that gas bubbling is the subject of JP 02-904593.

For the above reasons, claims 6, 20, 24 and 25 are believed to be non-obvious and in allowable condition. Claims 12, 14-19 and 21-23 and 26-27 are dependent therefrom and are

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thus believed to be non-obvious for the same reasons as claims 6 and 20. Reconsideration and allowance of these claims is respectfully requested.

2. Claims 2, 4, 8-9, 13 and 28 have been rejected under 35 USC 103(a) as being unpatentable over Kazumi in light of Buckmaster ' 756 and further in light of Saito et al. (US 5,397,831). Applicant disagrees. (New claims 29 and 30 are former claims 2 and 4.)

Applicant reiterates the arguments discussed above with regard to Kazumi and Buckmaster relative to claim 6. And as discussed above, the combination of Kazumi and Buckmaster is without motivation to one of ordinary skill in the art. Furthermore, the purpose of the overcoat in Kazumi is to separate the metal powder containing PFA layer from coming in contact with the contents of the chemical vessel because such contact could lead to contamination of the vessel contents by the metal powder, or the attack on the metal powder by the vessel contents, possibly compromising the PFA lining. Therefore, Kazumi teaches formation of a second resin layer on top of the first resin layer containing metal powder [0011] and [0012]. On the other hand, the 1-5 mm thick layer of Saito contains polyphenylene sulfide particles and a heat resistant filler (col. 3, lines 7-23). The filler may be metal or an alloy (col. 4, lines 52-55), as well as other materials, such as glass or silicates (col. 4, lines 55-59). Using the teaching of Saito to make the overcoat for Kazumi would not achieve Kazumi's purpose because the Saito composition contains not just PFA, but also materials that could react with the vessel contents defeating the purpose of Kazumi. Saito does not teach that such thick layers can be made without the use of the polyphenylene sulfide and heat resistant fillers in Saito's invention.

With regard to claim 13, the Examiner reiterates that Kazumi in light of Buckmaster teaches the limitations of claim 6, but does not teach the use of tin as the metal powder, but that Saito teaches that bubbling in PFA can be overcome by using tin. Applicant reiterates that the combination of Kazumi with Buckmaster is without motivation and except in hindsight, utility. Furthermore, Saito's teaching is limited to the use of tin to prevent bubbling in PFA. As with the metal powder in Kazumi, in Saito there is no teaching that tin promotes adhesion of PFA to the interior surface of the hollow article. Saito states that rotolined PFA coatings may have good adhesion at the time of coating, but that shrinkage, especially in thick coatings, can cause peeling or cracking of the coating. The addition of the heat resistant filler reduces the specific shrinkage (i.e. linear shrinkage) to not more than 5.1% (col. 6, lines 50-61; col 7, lines 8-13). Saito does not teach the use of tin as an adhesion promoter.

For the above reasons, claims 2, 4 and 6 and 13 are believed to be non-obvious and in allowable condition. Claims 8, 9 and 28 are dependent therefrom and are thus, believed to be non-obvious for the same reasons as claims 1, 2 and 6. Reconsideration and allowance of these claims is respectfully requested.

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A petition under 37 CFR § 1.136 for a one-month extension of time to respond to the Examiner's action is enclosed, the fee should be charged to Deposit Account No. 04-1928 (E.I. du Pont de Nemours and Company.) The Request for Continued Examination fee is also to be charged to this Deposit Account. If, any additional fee is due in order to obtain consideration of this response, please charge that fee to the above identified account.

In view of the foregoing, allowance of the above-referenced application is respectfully requested.

Respectfully submitted,

Tamera L. Fair

TAMERA L. FAIR
ATTORNEY FOR APPLICANT
Registration No.: 35,867
Telephone: (302) 892-7948
Facsimile: (302) 992-3257

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